

IN THE CLAIMS

For the convenience of the Examiner, all pending claims of the Application are reproduced below regardless of whether amended or not.

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36. (Currently Amended) An apparatus, comprising:

a first ring network having a first optical carrier; and

a second ring network having a second optical carrier, wherein the first optical carrier is operable to transmit one or more signals in a first direction and the second optical carrier is operable to transmit one or more signals in a second direction that is opposite to the first direction, and wherein the first and second ring networks implement a wavelength division multiplexing protocol, the first and second ring networks including:

a pair of nodes that comprise a first and a second node, the pair being coupled along the first and second optical carriers and being operable to manage a subset of wavelengths within a set of transmission wavelengths, the set of transmission wavelengths including more than one transmission wavelength such that one of the transmission wavelengths can be switched while other transmission wavelengths in the set are not switched, a selected one of the set of transmission wavelengths may be reserved on the first optical carrier during normal operative conditions and during a failure the selected wavelength is implemented on the first optical carrier, wherein the first and second nodes are further operable to communicate with each other and to communicate along a working path under the normal operative conditions, the first and second nodes being further operable to communicate with each other along a protection path during the failure within a selected one of the first and second ring networks such that one or more optical signals are rerouted along the protection path during the failure, and wherein a response to a failure condition is executed on a channel level, the first and second ring networks being coupled to an optical switch unit that includes a number of switching blocks that is twice a number of protected channels.

37. (Previously Presented) The apparatus of Claim 36, wherein the first and second ring networks are operable to propagate one or more optical signals in one or more transmission channels included therein, the one or more transmission channels being defined by a set of wavelengths having a predetermined wavelength transmission band.

38. (Previously Presented) The apparatus of Claim 36, wherein the pair of nodes are operable to communicate optical data at first and second wavelengths.

39. (Previously Presented) The apparatus of Claim 38, wherein the working path utilizes the first wavelength for optical data propagation on the first ring network and the second wavelength for optical data propagation on the second ring network.

40. (Previously Presented) The apparatus of Claim 39, wherein the first wavelength is not used during a selected time interval on the second ring network for optical data propagation and the second wavelength is not used during a selected time interval on the first ring network for optical data propagation.

41. (Previously Presented) The apparatus of Claim 39, wherein the pair of nodes are operable to communicate optical data at a pair of generic wavelengths that define a logical ring that may include the working path that utilizes the first wavelength on the first ring network and the second wavelength on the second ring network.

42. (Previously Presented) The apparatus of Claim 38, wherein the protection path utilizes the first and second wavelengths to communicate optical data.

43. (Previously Presented) The apparatus of Claim 36, wherein the first and second nodes are operable to perform add/drop/bypass operations for one or more optical signals propagating along a selected one of the first and second ring networks.

44. (Previously Presented) The apparatus of Claim 36, wherein the first and second nodes are operable to perform an amplification operation for one or more optical signals propagating along a selected one of the first and second ring networks.

45. (Previously Presented) The apparatus of Claim 36, wherein the first and second nodes are operable to perform a regeneration operation for one or more optical signals propagating along a selected one of the first and second ring networks.

46. (Previously Presented) The apparatus of Claim 36, wherein the first and second ring networks define an optical transmission system that includes inner and outer ring networks that are operable to facilitate propagation of optical data in opposite directions.